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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) H37-091 DIV	
I hereby certify that this correspondence is being facsimile transmitted to Commissioner for Patents, Alexandria, Virginia 22313 at fax number 571-273-8300 on September 11, 2006 on <u>September 11, 2006</u> Signature <u>Chih-Sheng Lin</u> Typed or printed name <u>Chih-Sheng Lin</u>		Application Number 09/824,936	Filed April 3, 2001
		First Named Inventor Jacques Schmitt	
		Art Unit 1763	Examiner Anna M. Crowell
Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal. The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.			
I am the <input type="checkbox"/> applicant/inventor. <input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/98) <input checked="" type="checkbox"/> attorney or agent of record. 56,402 Registration number <input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34		<u>Chih-Sheng Lin</u> Signature Chih-Sheng Lin Typed or printed name (845) 359-7700 Telephone number September 11, 2006 Date	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.			
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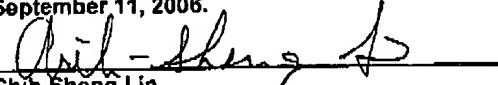
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Chih-Sheng Lin
Dated: September 11, 2006

Patent
Attorney Docket: H37-091 DIV
Firm: Notaro & Michalos P.C.
Fax No.: 845-359-7798

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : J. Schmitt
Application No. : 09/824,936
Filing Date : April 3, 2001
For : PLASMA REACTOR FOR THE TREATMENT
OF LARGE SIZE SUBSTRATES
Examiner : Anna M. Crowell
Art Unit : 1763

**5 Pages Via Fax
To: Examiner Anna M. Crowell**

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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450**

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

Claims 1, 3, 4, and 6-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanada (Japanese Patent Publication 08-186094) in view of U.S. Patent 6,177,023 to Shang, et al. ("Shang") and U.S. Patent 5,210,466 to Collins, et al. ("Collins"). Claims 1, 3, 4, and 6-8 are also rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanada in view of Shang and U.S. Patent 6,199,505 to Sato, et al. ("Sato"). See May 11, 2006 Office Action, pages 2-8.

Applicant respectfully submits that the Examiner has failed to establish a prima facie case of obviousness for the claimed subject matter in view of the applied prior art references.

It is well settled that to establish a prima facie case of obviousness, the Examiner has the *initial burden* to show that there is *suggestion or motivation* in the prior art reference (or references when combined) to modify or combine the teachings of the reference(s). See, e.g., MPEP § 2142. It is inappropriate to use applicant's disclosure as a blueprint (or to use hindsight based on knowledge obtained from application's patent disclosure) to reconstruct the claimed invention from selected pieces of prior art absent some suggestion, teaching, or motivation in the prior art to do so. See, e.g., *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051-52, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988); *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057(1968); *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) ("In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.").

The state of the art in plasma enhanced chemical vapor deposition at the time U.S.

Serial No. 09/401,158 (the parent application of this application, now U.S. Patent 6,228,438) was filed (i.e., on September 22, 1999) is such that the ordinarily skilled person in the art knows that the ***strong plasma non-uniformity due to the standing wave effect would prohibit the use of high frequency for applications in large area reactors*** (emphasis).

Collins teaches applying frequencies of between 50-800 MHz to wafers that are 4-8 inches in diameter (see Collins, col. 4, lines 35-39; and col. 7, lines 58-60). Collins also teaches that 4-8 inch (or 10-20 cm) wafers are "large wafers" (see Collins, col. 7, lines 58-60). As such, those skilled in the art possessed with the understanding of standing wave effect and appraised of Hanada and Collins would not be motivated to drive the plasma reactor at high frequencies to treat substrates several times (i.e., 3.5 times) larger than the "large wafers" of Collins because they will recognize that ***plasma inhomogeneity will occur*** (emphasis).

Sato indicates that there is a need for increasing the size of the glass substrate to 1 meter square (see Sato, col. 2, lines 37-39). However, Sato is completely silent about problems in layer homogeneity with large substrates. The only example given by Sato is an apparatus designed to process ***8 inch wafers*** using a VHF band frequency of 60 MHz (see Sato, col. 10, lines 10-14). If those skilled in the art were to scaled up the apparatus based on the teachings of Sato to treat substrates as large as 1 meter square, the apparatus may not work as intended due to the strong plasma non-uniformity caused by the standing wave effect. The mere recognition by Sato that there is a need for plasma reactors that can process larger substrates does not provide the necessary motivation to

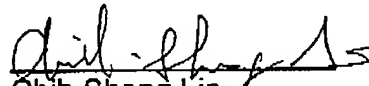
scale-up the reactor since those skilled in the art recognize that as the reactor size increases so does the standing wave effect. Without a solution or suggestion for overcoming the standing wave effect in *large area reactors to be driven at high frequencies*, one would not simply scale-up the reactor chamber and/or electrode(s) to accommodate a substrate of any desired size.

Shang teaches an apparatus and method for holding a substrate on a support layer in a processing chamber (see Shang, abstract). The plasma (169) does not deposit material or etch the substrate (see Shang, col. 6, lines 49-55). Instead, the plasma creates an electrostatic attraction between the respective surfaces of the substrate and the support layer (22) to hold the substrate substantially flat against the support layer (22). See Shang, col. 7, lines 23-28. As it is apparent to those skilled in the art, utilizing plate-charge inducing plasma to create electrostatic attraction between the substrate and support layer is not equivalent to performing plasma deposition on large substrates because plasma processing in large area reactors driven at high frequencies is affected or dominated by the standing wave effect. As a result, those skilled in the art with understanding of standing wave effect would not be motivated by Shang to scale-up the electrode and/or reactor of Hanada since they would appreciate that holding the substrate substantially flat against the correspondingly-sized support layer will not be effective in overcoming plasma instability as the chamber size becomes larger and larger.

Based on the foregoing remarks, Applicant respectfully submits that absent hindsight knowledge derived solely from this Application, those skilled in the art would not be motivated to look to the teachings of Collins, Sato, and/or Shang to modify Hanada.

Accordingly, the application and claims are believed to be in condition for allowance,
and favorable action is respectfully requested.

Respectfully submitted,



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Dated: February 21, 2006

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